CURSORY

REMARKS

ON

CONTAGIOUS DISEASES,

AND ON

BATHS.

PART I.

ON CONTAGIOUS DISEASES.

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Fac ut tuam, et Tulliæ valetudinem, cures!

Cic. Epist. ad Familiar.

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but more of art than of nature appears in their composition. They are crouded with synonyms, and with frivolous distinctions, tending to embarrass, not to promote the progress of science and practice. The plan of the justly celebrated Dr. Brown of Edinburgh, may be mentioned as the most simple, comprehensive, and useful, in dividing all diseases into sthenic and asthenic. Dr. Frank of Vienna, is excellent on fevers, in his work "De Curandis Hominum Morbes," and indeed all the minor distinctions, in the catalogues of fevers, may be referred to the three general heads of *inflammatory*, *nervous*, or *putrid*, as they assume either the continued, remittent, or intermittent form. The enumerations and descriptions alone, of the particular species, would be sufficient to fill a moderate volume.

The dreadful devastation of human beings from fevers in camps and in armies, is seldom to be entirely prevented, though it may be sometimes mitigated by the salutary regulations of a judicious and humane general, in co-operation with a skilful physician.

How is a soldier landing in North Holland, in St. Domingo, or on the pestilential shores of Syria and of Egypt, continually exposed to the causes of fevers, to be screened from the action of these causes on his body? Infections, contagions, marsh miasmata, rising under extremes of heat or cold, whether in Zealand, the Campana di Roma, in the tropical climes, or other parts,

baffle human skill, and in a few hours pull down the strongest men. The ague, the yellow fever, and the plague will appear, and all that human ingenuity has hitherto suggested, in prevention or in mitigation of these dreadful maladies, amounts but to very little. This consideration should not, however, be offered or admitted in exculpation of any criminal ignorance or neglect, on the part of a commander, naval, military, or medical.

THE END.

W. Flint, Printer, Old Bailey, London.

INTRODUCTION.

As several of the author's ideas have found their way into the world accidentally, and in an unconnected state, he is induced to lay the following Essays before the public, that he may not have to answer for any other errors than his own. It was his original intention to have arranged methodically and to have reduced within the compass of one small volume, the various phenomena of contagious and syphilitic diseases, together with the advantages society may hope to derive from the observations and experience of many distinguished professional persons of our own country and of other enlightened parts of Europe; in the means

they suggest for arresting the progress of those evils, either by stopping them in their commencement, when preying upon particular organs, or by rescuing the system from general contamination.

To these he further intended to have added a TREATISE ON BATHS, considered both as luxuries and as remedies; and remedies too, of very singular efficacy in the prevention and cure of such diseases.

But he has hitherto been *unavoidably prevented* from accomplishing this purpose to the extent of his wishes.

As however delay, till an original plan be brought to perfection, is almost endless, and often renders that labor abortive, which might prove useful, in an unfinished state, by stimulating the exertions of

abler men, the author ventures to submit to the candor of the public the following imperfect remarks—fully conscious that although in the warmth of imagination it may be easy to conceive a great deal, yet in the busy intercourse of life it will commonly be found difficult to execute even a title; while

" He who delays his task from day to day,
" Does on a river's bank expectant stay,
" Till the dull stream that stops him shall be gone,
" Which runs, and as it runs, for ever will run on!"

PREFACE.

TO THE READER.

WHEN I venture to reason upon contagious diseases, and to represent the virtues of baths, and the efficacy of warmth and moisture, I respectfully submit the result of my limited observations to the consideration of those, whose liberality I have many times experienced; whose joint labours are invariably directed to one great common end, the health and welfare of society; whose abilities and benevolent zeal render them the distinguished ornaments of their country and profession; that they may try and decide upon the propriety of adopting these expedients, more fully and satisfactorily than I can do myself; for it is in the sanction of their name and authority, that this

or any other practice worthy of notice, must ultimately find its most powerful recommendation. In these attempts I do not seek to detract from the merit of any author, particularly of my cotemporaries ; nor is it my wish to refuse an ample measure of justice to the aids I receive. I have through life been willing to give every thing to others, and to reserve nothing for myself, but the consciousness of not having spared pains to discover, to possess myself of, and to apply the abilities of the profession for its service. I never seek, from motives of narrow policy, to suppress any authority, nor to thwart any one in his career; but am always ready, to the height of my means, (and they fall very short of my desires) to forward those abilities which overpower my own. He who has no other materials to work with, than what are within himself, must indeed be badly provided for, in any undertaking. Poor in my own faculties,——I seek and consider myself rich in the talents of others ; but every man is in duty bound to contribute his portion, however small, to the mass of general know-

ledge, and, whoever in the profession, locks up his talent, inconsiderable as it may be, deserves censure, as an unworthy member of the society in which he lives.

Upon this principle, and with these persuasions, if by application and perseverance my humble efforts and observations should ever seem of sufficient importance to deserve attention, I will endeavour to perform an incumbent duty, with zeal at least, while I am honoured with indulgence by communicating them to the public.

In my present endeavours I respectfully trust, that the peculiarity of my professional education, abroad and at home, and the opportunities I have had, not only of frequenting the baths of our own country, but also those of the continent of Europe, in the Mediterranean and the Levant, and likewise of observing the phenomena and treatment of contagious diseases, may be fairly considered, and may screen me from those imputations of presumption, to

which every one is liable in his early attempts. I reluctantly advert to such advantages, from a consciousness that my humble abilities and attainments cannot correspond, either with my own wishes, or with the expectations that must naturally arise, from a comparison between them and the means that have been afforded me, to which they are not at all proportioned; and again, from the high respect I bear the talents of my cotemporaries, and from a conviction that there are but few of them in this enlightened age, who would not have surpassed me in the success of their labours, had their talents been employed in the situations in which it has been my fortune, or rather misfortune, to have been placed. In submitting these few practical remarks to the tribunal of the profession, and the public, and in stating them without the *cant and parade of science,* which I abhor, and would ever studiously avoid, I trust I may not appear wholly undeserving of that good opinion with which I have hitherto been honored, and which I hope I shall always continue to deserve.

As no phenomenon, principle, nor rule of practice is here laid down, but what I have either observed myself in military hospitals, or in the hospitals I have attended in this or some other metropolis; and as nothing is recommended that has not been tried by myself, at least, if not by practitioners in rank and experience much above myself, I entertain a hope that these few observations may prove of some practical utility to the public, in adding to their comforts, or in alleviating those miseries to which so many are, and, from the present constitution of society, must continue to be frequently exposed.

Nothing now remains for me but to apologize to the reader for having trespassed upon his time by soliciting so much of his attention to these points. But I shall be pardoned, I hope, when it is recollected, that my wish is not to lose sight of subjects which persons, more able than myself, may perhaps turn to good account.

M. L. Este.

1, *Homer Place, New Road*, 1810.

VACCINATION, THE VACCINE.

THE term *Inoculation* signifies the transplanting of distempers from one subject to another, and is used particularly for the engraftment of the small pox, while *vaccination* denotes the operation for communicating the *variola bovilla*, or cow-pock.

The practice of inoculation, a great improvement in the healing art, was originally received from the hands of ignorance and barbarism; but happily our countrymen did not measure the value of the practice by the meanness of its origin, but by its real importance and utility. They became examples by adopting it, they encouraged it, and the rest of the world were determined by the general event of the method.

It was not till the beginning of the 18th century that the practice began to be systematically introduced; for the most common customs of distant countries, are frequently the last to attract the observation of travellers, who, engaged in other pursuits, must be indebted to accident for a knowledge of such things

as the natives seldom talk of, under the belief that they are known to all the world.

The plain rationale of practice is what the most learned treatises on many subjects of medicine often omit to give: this is so common a failing, that a well-informed person, —— of excellent understanding, may frequently wade through a long elaborate work, spun out with wire-drawn amplification, and not be able to satisfy himself upon a first and principal question; as for instance, in small pox why do we inoculate?

The reason is extremely simple. The natural small pox, or that which spreads by contagion, was observed to be a malignant disease, indeed often more than pestilential, but which sometimes obtruded itself in a milder form, and as all seemed liable to it *once* in the course of life, many *courted* the lesser evil, and continued to do so, until it was discovered and well established that the disorder transplanted by inoculation was much less fatal, than that communicated by contagion. Thus the adoption became general. Some rubbed their hands, arms, or their foreheads against the bodies of those who were afflicted with the milder disease, others tied cotton or worsted fillets soaked in variolous pustules, round their children's wrists, that the more favorable disorder might be so conveyed to them; and lastly, an operation called inoculation, too well known to require description, was resorted to, for rendering

the engraftment of the complaint more certainly successful. This artificial method of producing the disease, almost stripped it of its terrors, rendered its aspect mild, its progress uniform and without hazard.—Observations and reasoning, similar to those which *led to* inoculation, have lately introduced another great improvement in medicine, namely, *vaccination*, or the substitution of a disease still milder than the inoculated small pox, even in its least formidable shapes, by which the necessity for variolous inoculation is obviated and superseded.

There always have been pantomimic actors and jugglers in the profession, ready to recur to singularities, paradoxes, and incongruities, as the only means of *obtruding themselves upon the public.*

But as a few trivial objections from a Grimaldi in physic cannot affect a long and well established doctrine, I shall add that no reward can be too great for our immortal Jenner, who released suffering humanity from a terrible visitation, and his practice, sanctioned by the proclamations of our royal colleges of physicians and surgeons, and rewarded by the British senate, is now confirmed by many years experience in almost all the civilized world.

The objections formerly made to *inoculation*, have been revived by a very few writers against the introduction of the *vaccine*; namely, that it is bringing a distem-

per upon ourselves; that the prophylactic powers of vaccination are greatly overrated, and that we are not thereby exempted from future infection. That other diseases are communicated with the vaccine matter; that the diseases which we apprehend, may perhaps never attack us in the natural way, &c. all which objections, however ingenious and specious they may appear, have been completely refuted by the statements of the Colleges, by the proclamations of the senate, and by the subsequent evidence of innumerable facts.*

The philosophy of all inoculations rests entirely upon the most simple and important laws of animated nature.

When the body has been once acted upon by variolous contagion, it seems to become less sensible or wholly insensible to its future action; and in my humble belief also to the action of other contagions. For we know by the laws of animated nature that the less a living body has been exposed to stimuli the more exquisite will be its sensibility; the more liable will it be to infections, &c. the more susceptible of contagions. When a living body has been made subject to their influence, it becomes enured, hardened, and I believe enabled to resist not only variolous but

* Those who want further information may refer to the pamphlets recently published upon these points, and particularly to the excellent letters of James Moore on vaccination.

other infectious influence. By the laws of the mutual relations between stimuli and the excitability of living beings, we likewise know that the more weakly the powers have acted, or the less the stimulus has been, the more abundant will the excitability become; and, vice versâ, the more powerful the stimuli the more exhausted will be the excitability.

In these well established laws we may discover the necessity for subjecting to vaccination, all those who may be exposed to contagious diseases in hot climates.—When under orders for the *Mediterranean, Indian,* or *Tropical* service, such of our soldiers as have not gone through either the small or the cow pock, should invariably be vaccinated.

There certainly are varieties in the constitutions and natures of men, and allowances must be made for such differences of temperament and habit, in explaining the result of *stimuli acting upon our bodies.* Thence it happens that "*what is one man's meat, is another man's poison*;"—that one and the same stimulus shall produce a violent effect upon the generality of mankind, and shall scarcely excite the slightest irritation in a particular individual:—But a few such extraordinary phenomena are not to subvert a general doctrine, and cannot militate against laws established on the solid basis of repeated observations.

I was myself inoculated six times for the small pox,

I have attended not only variolous patients in this country and the Levant, but several persons who died of the plague shortly after they were attacked, and I have been otherwise exposed to contagions, without suffering in the slightest degree from any such exposure.—I have heard of certain persons taking the small pox after the vaccine; of other persons in the Levant catching the small pox a third and fourth time after inoculation, all which may be very true: but these accidents will not alter my faith in the laws before laid down, nor will they at all shake my belief that a person shall, by vaccination, be rendered LESS LIABLE to infection than he would be without it, even though he should not prove quite insensible to contagious influence for ever after that operation. I am of opinion that its good effects extend much farther than the prevention of *only one* species of disease: namely, that vaccination enables the constitutions to resist many other disorders that are catching, as fevers, &c.

By royal edict of the Emperor Napoleon's, vaccination is ordered generally through all territories under French dominion; and by a late circular letter from the secretary of state for the home department, it has been recommended to the clergy, &c. to endeavour to do away the prejudices which have been raised among the lower and even among the credulous of the higher orders of society against vaccination.

Lady Mary Wortley Montague, the lady of the British ambassador at Constantinople, inoculated her son, a boy of six years of age, in the year 1717; he had but few pustules, and soon recovered.

In the spring of 1721, inoculation was tried, successfully, on criminals in London, by royal permission. In 1722 Lady M. W. Montague inoculated her daughter (six years old) then in England. The children of the royal family, and of the nobility, were afterwards inoculated. The practice succeeded, soon prevailed, extended to Hanover, was adopted in Germany and in other adjacent countries; particularly in Russia, under the direction of Baron Dimsdale, and in Prussia under that of Doctor Baylis. Thus commenced the practice of inoculation under the management of art.

VENEREAL AFFECTIONS.—LUES.

The general and topical affections comprised under this head, all arise from some specific morbid poison applied to the surface of the body. This either confines its action to the part with which it is brought into immediate contact, or in consequence of absorption pervades and contaminates the system; and in the course of circulation particularly attacks such organs as are most suscestible of the disease.

In order that contagion should produce the disease, there must be the *necessary pre-disposition* in the person exposed; mere exposure to the poison will not do so, unless there exists at the same time in the person exposed that *susceptibility, or peculiar state* of constitution, without which no one will be liable to any infection, whether of the venereal, small pox, plague, hydrophobia, or any other disease. What this particular state of constitution is, we do not know; but daily experience convinces us that such a state, is a condition necessary for the communication of the disease. Thus the same person will not take the disease at one exposure, who will catch it severely at the next; though the poison in the latter instance shall be mild in comparison with the former; and the second exposure shall be only at a short interval of time from the first. Two persons shall be equally exposed to infection from the same source, one shall be severely infected, the other shall escape wholly uninjured, from not being just at the moment liable to the action of the poison.

I was inoculated six times for the small pox, and lived with five of my relations, in whom it took at the first inoculation; but as I was told, I never had any more of it in my youth than one small pustule, and I am sure I have not caught it since from any variolous patient, though I saw several in the Levant, where it

rages with peculiar malignity. Nor did I take the plague in Egypt, though I attended four of the soldiers, who died shortly after their first attack, with the most unequivocal symptoms of that disease; and though "BY ORDER," I was obliged to take blood from two of them. I have besides been exposed to the action of contagion, at least equally with some other persons of larger stature, and apparently of more robust habits than my own; they suffered from its influence, I did not.

And in the year 1804, in my last voyage to Malta, I put myself in quarantine to attend in the Lazaretto there, a much lamented friend and his servants, who arrived from Constantinople with fevers, of which they afterwards died. I never experienced the slightest bodily inconvenience, though I continued my attendance upon them day and night, almost uninterruptedly to the last; and though the usual swellings and symptoms of plague appeared upon them at the close of their fatal disorder. Daily experience proves the necessity of this predisposition; but what the particular states of body are that render some liable to infection, and protect others from its baneful influence, that cause the same person to take it, at one time, and to resist another, we cannot satisfactorily explain.

Nor are we acquainted with any preventive, in which

we can confide : some may put implicit trust in one wash and some in another. Some are encouraged by a belief in their own good fortune and in common ablutions. Cleanliness is unquestionably to be recommended, and frequent ablutions with soft soap, and washes, may prevent a portion of the poison from being absorbed, which would otherwise be taken into the system by the absorbents. Yet these will not screen the constitution from infection. The mere momentary contact of the poison during coition is sufficient to produce the disease in all its most formidable shapes, if the person from pre-disposition is liable to its action; and no subsequent washings can check or prevent the consequences; for when the infection has been once received the disorder must follow. Even if the original particle of the poison be neutralized, or driven out of the system, the disease will then take place, unless it be checked in its progress by the timely and proper interposition of the well known antidotes.

Venereal affections shew themselves first in one or other of two shapes, lues and gonorrhoea, or as pox, or clap, and a train of symptoms or distresses proceed from each of these sources, most of which may be checked or very much mitigated by the application of skilful surgery in the outset.

THE GONORRHOEA.

The symptoms attending gonorrhoea are apt to vary very much, and of all the forms of venereal affection it is the most irregular in its duration, and the most uncertain in its cure. Our great antidote for the lues, and its concomitants, is unnecessary, as it does not effect any change in gonorrhoea; almost all the assistance our art can afford in gonorrhoea is palliative; and thereby preventive of some other affections which grow out of the disease.

Gonorrhoea has been entirely checked and prevented in some few instances; but such practice when not skilfully directed may be dangerous, inasmuch as it may produce consequences more serious than the disease itself. A specific mode of action may certainly be changed and corrected by producing in the urethra another or greater irritation; but it will be found most frequently better that the disease should be left to time to take its own course and exhaust itself.

In our treatment we should attend to the state of the general health and constitution, more than to the local symptoms, in order to mitigate them; that is, in order to allay the heat, and to lessen the inflammation, we should keep the body cool, by *obviating costiveness*, by *repose*, by *copious dilution*: and if the symptoms increase to an unusual height, by *general and topical bleeding*;

warm bathing, and blisters, under certain circumstances, may be applied with the happiest effects. Injections are entirely condemned by some, and warmly approved of by other authors. Patients should be extremely cautious in the use they make of them, however strongly recommended they may be by certain empirics of little knowledge or foresight; from the apparently beneficial effects sometimes produced in their first operations. When I resort to them, I seldom adopt such as are either highly *irritating* or highly *astringent*.

The suspensory or bag truss should always be worn in these diseases; and it should be recollected that simplicity is no where more necessary than in its make and use. The common suspensory is found to have many inconveniences from the manner in which it is contrived. I some years ago endeavoured to simplify it, and accordingly directed suspensories to be made, which I am told by those who use them, answer better and sit more pleasantly than the common bandages of the shops.

It has long been a question whether gonorrhoea proceeds from the same poison as lues; or whether the clap is not quite a distinct disease, produced by a poison of its own.

Much has been said on both sides; authority has been set up against authority, and great differences

of opinion have arisen upon the sense and interpretation of the authorities quoted, and upon the results and inferences to be drawn from the experiments instituted both in confirmation and in contradiction of the position ; peculiarly extravagant technical phrases and cant expressions have been introduced to explain particular meanings and opinions; and as words multiplied, the opportunities of cavilling upon them multiplied also. In this confusion, confusion to the professors themselves, an Egyptian darkness to the rest of the world, the mist appears to have thickened in proportion as we have wandered from the observations of nature. The result of all this argument proves that we can reason upon any venereal poison only as Newton reasoned upon gravity, by observing its effects.

What interests the world most, is to know whether the constitution is exposed from clap as it is from chancre, to venereal contamination : whether, in addition to other inconveniences, a course of mercury should, or should not, be inflicted on suffering humanity, to relieve the symptoms, and to screen the constitution from the consequences of gonorrhoea : daily observation may satisfy us fully upon these points without any dispute whatever. We know from experience that the symptoms of lues do not grow out of a clap, that all the trouble attending the exhibition of mercury may be

spared the patient, and that the best mode of treating the gonorrhoea (generally speaking) is the palliative mode before mentioned.

While we can offer only palliative aid in gonorrhoea, our more formidable enemy, the lues, may be completely checked if taken in time, or wholly extinguished by the expedients we possess, *the caustic*, *mercury* and *baths*.

In the course of my experience, both in the Guards, and in my private practice, I always found that chancre healed very rapidly under the local applications which I continue to apply: and I always prescribed mercury by frictions, gradually, at intervals, and for a long continuance; without administering any of that mineral internally: for the pills in common use interfere with digestion, derange the whole system, and seldom produce any salutary operation at all proportionate to the disturbance they occasion. No one has ever returned to me with secondary symptoms. In my private practice, since I resigned my military situation, I have combined the free use of baths with my other remedies, and every new instance convinces me of the superior advantages of such simple methods.

I can say with some confidence, that *baths* are great auxiliaries to *mercury*, and powerful agents, both in the treatment of strictures, of syphilis, and of local affections, arising from those causes; and to their happy ef-

fects in such cases I wish particularly to invite attention. When I first went to Italy in 1793, to prosecute my professional studies at Pavia, the method of *Cirillo* of Naples, including the frequent use of baths was adopted there; and also at the hospitals at Milan, Rome, Bologna, and Venice, though not quite to the extent to which I afterwards found it was carried at Naples by Cirillo himself. From observation, I then formed a very high opinion of its efficacy; its simplicity and agreeableness appeared to me no small recommendation of its merits; because baths go far in mitigating not only the miseries of the disease itself, but likewise those which necessarily result from the remedy we employ against it. (For in the nitrous acid, notwithstanding all that has been said in its favour, I cannot place confidence). There is one simple circumstance with which we do not seem to be sufficiently acquainted. This regards the "*healing quality of common hot water*;" which may perhaps be fairly mentioned as not the least valuable of its virtues; and this healing quality is at present more known to me; I never now omit the use of so valuable an auxiliary where there is infection; and I am often astonished to observe the kind and rapid manner in which the healing process goes on under its influence. I have lately tried it in other cases than those connected with contamination of the system, viz. in simple, old, obstinate cases, and with the same success.

Both *strictures* and *venereal* affections are disorders to which the military from their habits and the constitution of society are particularly liable; being more dangerous in their consequences, than severe in their original symptoms they are generally neglected at the beginning. In their treatment we should attend not only to *present* but to *future* inconveniences, we should watch them with all possible industry; for dangers seen from afar are easily prevented; but if the cure be protracted until the evils have taken place, the remedies must necessarily become distressing in proportion as the disorders grow inveterate; at first they are of easy cure, and scarcely make their presence known; in process of time, not being observed nor resisted at the beginning, they become easily known, by the severity of their symptoms and accompaniments, but are proportionably difficult to cure.

These evils discovered at a distance, as they will be by prudent experienced men, produce but little mischief; and that little may be easily obviated or perhaps wholly averted. But when, through ignorance or inattention, they are suffered to take root and spread, so that every one can discern them, there may be little room left for any remedy, and the disease may then probably be incurable.

STRICTURE.

A STRICTURE, in the common acceptation of the term, means a narrowness of the canal of the urethra, partially obstructing, or rendering it wholly impervious to the passage either of a bougie or of the urine. There are two kinds of strictures, the *Permanent* and the *Spasmodic*, and the narrowness may occupy either a great length of the passage, or not extend further than a mere ridge or sharp circular projection in the tube; as if it were produced by a packthread, bound tightly around it; or the projecting ridge will sometimes be partial; that is, will not make the complete circle, but be confined to one side of the urethra, and forming a semicircular projection within it, will dam up one half of its capacity: and either of these obstructions may be attended with a great deal of thickening, flexion, or *tortuosity* of the canal; which from neglect, will increase so much, as to render the tube, naturally but slightly curved and patulous, obstructed and convoluted like a cork-screw.

When I was in the army, and since I resigned my military situation, I have had a variety of stricture and venereal cases under my care; from an idea many people entertain that a brigade of Guards in this metropolis must afford ample scope for such experience.

I have met with several, in which narrowness and

convolutions have *extended lengthwise* from the principal obstruction, the ridge or packthread stricture in the centre of the narrowness; and when the ridge was destroyed by caustic, according to the excellent method of Mr. Home, the narrowness and convolutions proceeding from it have generally yielded to the common bougie.

The evils arising from strictures form a numerous train of distressing disorders, which are attended with many local and constitutional symptoms; for instance, when the natural passage is so obstructed as not to allow the urine to pass, suppression of urine and all the disturbance proceeding from such stoppage will be brought on. This is dreadful! dreadful in its origin, in its progress, in its effects, and in the expedients necessary for its relief; because an operation no less serious than the puncturing the bladder, must, under certain circumstances, be resorted to without delay; for as the secretion of the urine is continually going on, and as the excretion cannot be effected, the bladder, which is the reservoir of urine will suffer so much from fullness and distention, that the operation must be performed to prevent inflammation and sloughing of that viscus, and even death itself. Sometimes the bladder will burst at the affected part; that is wherever the slough may happen to be, if at the posterior and inferior part, the

urine will insinuate itself into the cellular membrane of the scrotum, and perineum, and form a urinary abscess and *fistula in* perinœo, and in this mode, nature, under these circumstances, will find a new outlet for herself; or the slough will open a communication between the bladder and the rectum, and then the urine will be discharged with the stools, and the contents of the rectum may get into the bladder, (a terrible disease,) or the urine will make its way anteriorly, from the bladder to the cellular substance, between the abdominal muscles, and the urinary abscess will *then* point forwards. Or if the bladder yields towards the cavity of the abdomen, its contents will be discharged into that cavity among the abdominal viscera, the chilopoietic organs, or organs of digestion, and thereby cause such disturbance and such a train of symptoms, as from their severity will prove fatal; or it may happen that the stoppage in the natural channel may not be so complete as wholly to impede the passage; but at the moment of the preternatural distention of the bladder, when great efforts are made for its evacuation, the strictures may yield and allow a little urine to escape, *guttatim* by driblets, through the narrowness, and may so afford partial and temporary relief; but a paralysis of the bladder is often brought on in these circumstances by over distension of that organ, and new mischiefs thence arise. The *fistula in perinea*, and other unna-

tural passages will often heal, when the stricture which led to their formation is removed.

The running from the urethra, the thickening and distortion in the canal, many morbid affections of the prostrate gland, and of the bladder itself, many local irritations and constitutional affections which accompany strictures will subside and disappear when the cause from which they proceeded is removed; for the law "Sublata causa tollitur effectus" is universal.

Mr. Home adduces three cases of hydrocele cured by removal of stricture.

As the thicker and more glutinous parts of the urine will be prevented by strictures from passing away, we may easily understand and account for the formation of calculous concretions in the urethra, and even of the stone itself where stricture exists.

In short, no sound understanding, reflecting how very serious a part these diseases form of the "thousand natural shocks that flesh is heir to," can hesitate a moment in embracing the very great and essential relief which surgery has the power of affording in these cases. Anatomical knowledge, experience, and skill, are no where more necessary than in the management of the diseases of the urinary organs. There are two modes of treating strictures, *dilatation* and *caustic*. We learn by the bougie the situation and extent of the stricture; and we ascertain whether the contraction

is such as would be produced by a packthread tied round the canal, or whether it occupies a considerable extent of the length of the passage; and from the dimension of the bougie we form our judgment of the degree of the existing stricture. The bougies act mechanically, open the passage by dilatation, and in the routine of common practice, are used gradually, from a small to a larger size. They certainly may succeed in distending the canal to its full capacity, though not without considerable inconvenience and steady perseverance in their use. The relief they afford, however, is for the most part only temporary; because the disorder returns soon after the bougies are discontinued.

> "Oh! that the too, too solid flesh would melt,
> Thaw, and resolve itself into a dew,"

Is the consummation devoutly to be wished in the management of strictures. And the caustic is the great remedy that answers this purpose; for it consumes the very substance of the stricture. Though the application of this expedient may be sometimes attended with temporary inconvenience, and considerable anxiety on the part of the practitioner; it seldom will be found to fail, if skilfully applied, and sufficiently persisted in; and when strictures are attended with contraction and distortion, both before and behind them,

those will yield to common dilation as soon as the principal stricture on which they depended is destroyed; even in such cases the caustic

"Leaves not a wreck behind."

A variety of distressing symptoms and casualties will however occur in the management of these disorders. But the operation of the remedies may be assisted, and the sufferings of the patients may generally be much alleviated by applying early for relief, and by the judicious use of baths; expedients of great efficacy, though but seldom resorted to in these cases.

FEVER.

A DISEASE in which the body is violently heated, and the pulse quickened, or in which heat and cold prevail by turns. It is sometimes continual, sometimes intermittent. Physicians put together in their synoptical tables of classification, so many diseases, diametrically different in their natures, and in the plan of cure they require, under the class Fevers, that no general definition can be given which will apply to every particular species of fever. Many of the methodical arrangements are, without doubt, productions of great ingenuity;

ON BATHS.

CURSORY REMARKS

ON

CONTAGIOUS DISEASES,

AND ON

BATHS.

PART II.

ON BATHS.

By M. L. ESTE, Esq.

Late Lecturer on Animated Nature and the Philosophy of the Animal Œconomy at the Royal Institution of Great Britain.—Member of the Royal College of Surgeons, London; and of several other learned Societies at home and abroad.

" ΑΡΙΣΤΟΝ ΜΕΝ ΥΔΩΡ."

Ignis, Naturis omnibus, salutarem impertit calorem !

Cic. de N. D. 227.

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ON BATHS.

WE may fairly mention, as a subject of regret, that hot and vapor baths, and certain other expedients commonly resorted to with the happiest effects, as indulgences, and preservatives of health, in the Mediterranean, in parts of Italy, in the Levant, and in other countries, should be forgotten in our own; and that we should neglect them, notwithstanding the manifest advantages which result from their habitual use, if it were only with respect to cleanliness and comfort.

I conceived at an early age, and have since, by every day's experience, been wedded to the idea, that *nothing can be more conducive to the health, strength, and well being of man* than the judicious use of baths: for they seem to impart health and to cherish it; while in many diseases essential benefit may be derived from them alone;—they frequently afford powerful assistance to the operation of other medicines, and are attended with such uniform success, in particular disorders, from con-

tagion, that they seldom if ever should be omitted in their treatment.

The process of *Shampooing*, another luxury of the Levant, and all its happy effects, I am persuaded need only be a little known to be generally adopted. I am not singular in my opinions upon this subject; the Indians hold it in the highestestimation as a remedy; and the practice of rubbing, according to the excellent plan of Mr. Grosvenor, has already been found beneficial in speedily relieving many afflictions, which, beyond the reach of medicine, could not have been allayed by any other known expedient. His practice therefore may be considered as a step to the introduction of Shampooing. Those who *have been* in India, who *have tried* and who *really know* the value of these expedients, I am confident will gladly assist me with their good report in my endeavours to recommend them. (Vide Shampooing, page 47.)

The Honourable Basil Cochrane, during a long residence in our eastern territories, has added to his own experience many valuable observations on the effects of hot and vapor bathing upon others; and has lately communicated his information to the public in an elegantly written pamphlet.

He tried his steam baths generally at the temperature of 120°, in several cases of chronic rheumatism, of catarrhal fever, attended with hard cough and difficulty of breathing, in cases of gout, gravel and ophthalmia, and invariably with the greatest success.

As I had learnt from experience of ophthalmia in Egypt, the superior effects of warmth and moisture over the *cold applications* to the eye, which were *sometimes strongly* recommended there, I became curious to know the result of this steam practice; I accordingly made particular enquiries concerning it both of Dr. Veitch and of Mr. Cochrane himself; and I felt sincere pleasure on hearing that it coincided with my own observations. In one instance the relief from the steam was as great as it was sudden: the sight was restored without any return of the complaint, the eyes remained as strong and as well as they were before.

Though Mr. Cochrane's assertions of the very essential benefits to be derived from vapor baths, may apparently exceed any thing that the simplicity of such means can at first sight warrant us in believing; though they may be doubted by a few learned men, *upon principles of unsupported theory*, I nevertheless feel persuaded that their objections to baths, however specious in

appearance, cannot stand the test of experience; that more extended investigation will corroborate his statements, and will justify him in recommending with proper enthusiasm a subject of such great utility to public notice.

It has been remarked by a few, who certainly are not well acquainted with these practices, nor with the state of baths in London, however well informed they may be on other subjects, that these remedies were known many years ago; that accounts have been given of their efficacy in several diseases; that Hancocke formerly published his Febrifugum Magnum, or common water the best cure for fevers. That the *Febrifugum Magnum* has since been considered a *morbifugum magnum;* that there are many well authenticated accounts of extraordinary cures performed by water; that much has been stated in the relations of the Persians and Chinese; much written upon the *acque termale dei Bagni di Pisa;* upon the waters at *Carlsbad, Recova, Bareges, at our own baths,* and at those in Russia and elsewhere; that Dr.Currie published, as lately as 1805, his Medical Reports on the effects of water, cold and warm, as a remedy in fevers and other diseases, whether applied to the surface of the body, or used internally.

Though I may be willing to admit the truth of all these remarks, yet I doubt whether *warm and vapor baths, frictions,* and *shampooing* ever were employed in this country, as they are commonly in India, and the Levant, or as they should be, according to the intended methods. And I must further observe, that however well understood they may have been in former times, they certainly are *neither* duly appreciated, nor generally resorted to at present. In the schools in *Edinburgh, in London,* and *upon the Continent,* these expedients were seldom NAMED, when I attended them between 1793 and 1800. Though the use of cold affusions has since been recommended in the lectures at Edinburgh, as appears by Dr. Gregory's letter to Dr. Curry, dated Edinburgh, Nov. 9th, 1803.

Dr. Gregory's letter relates to the success of cold affusions in Scarlatina. He therein states," your obser-" vations appeared to me very interesting. I transcrib-" ed into one of my note-books that part of your letter " *verbatim,* and have read it the two last winters in " college, when treating of the cynanche maligna ; tell-" ing my pupils that I had *no personal experience* of the " practice, but that I thought your testimony in its favor, " and " *the analogy*" of the good effects of the very cold

"practice in continued fever, and in natural small pox, "*so strong*, that I was resolved to try your practice of the "affusion of cold water in scarlatina, the first good op- "portunity." Dr. John Gregory tried the affusions with the best success upon his sons, and says in his letter, "I *can now propose and urge* the *practice with a good* "*grace, and some confidence*, after having tried it with "success on a child of my own."

He likewise tried it upon his other children, with the same happy results that attended its adoption with the first child.

A Pavia professor, Frank, Jun. mentioned the warm bath and frictions; and in the hospital there sometimes used common warm bathing with the greatest success, in the treatment of those agues which are endemical in Lombardy; and with which the hospitals at Milan and Pavia are regularly filled from the adjacent rice plantations every summer and autumn.

I have prescribed hot baths, in some instances of ague in this country, with the best effect, and I recommended them in two cases lately, where I met other medical men, of rank in the profession superior to my

own, and to whose talents I pay the greatest deference. But each of them made similar objections to this recommendation, upon the very principles in which I had been educated, and which seem to be the prevailing principles of daily practice.

As far as my experience goes, warm and vapor baths prove useful not only in allaying pain, but in restoring patients reduced by fevers, whether continued, remittent or intermittent, and by the use of mercury, to their former health and vigor.

Strange to say, as not easily reconcilable with modern theory, the colliquative perspirations attending extreme weakness, whether in typhus or from mercury, *will not be increased* but *checked*, by alternate ablutions, and by hot or vapor baths; they indeed often yield to them when they will not yield to bark, wine, acid, and to the several medicines in the catalogue usually exhibited for the purpose of stopping them. In each of the cases before alluded to, there was great prostration of strength, muscular pains in the limbs, and profuse colliquative perspirations in the morning, by which the patients were distressed and considerably reduced. From what I had experienced in many similar instances, in addition to the other remedies used on these occasions, I should

have prescribed the hot bath as a powerful auxiliary. The common objections to it were made; namely, *that there was sufficient weakness, and the perspirations were sufficiently profuse without the additional relaxation and excretion* which would be brought on by warm bathing; and the baths were of course omitted.

Notwithstanding our national situation, and the dominion we naturally claim and boast of, over the watery element, such a degree of hydrophobia still prevails among us, particularly among literary men, (who read perhaps too attentively on speculative science) that I fear a practice, in reality simple, though in appearance bold, and contrary to common prejudices, will be slow in making that progress, which from its efficacy and success, it ought to make among us. No very great number of our naval men bathe or swim; a small proportion of our military use the water; and but few indeed of the ingenious gentlemen who remain at home, of the indefatigable Bond-street loungers, and dashing charioteers wallowing in luxuries and pursuing indulgences, who employ their riches wholly in acquiring pleasure, seem to know the value of one enjoyment, which even *they* may venture to take with comfort and advantage, namely, the *tepid bath*.

They cannot say to each other as Cæsar in the play says to Cassius.

"———— Dar'st thou, Cassius, now
Leap in with me into this angry flood,
And swim to yonder point?————
The torrent roared; and we did buffet it
With lusty sinews, throwing it aside,
And stemming it with hearts of controversy:"

This will not do for them; the gilded butterflies and beings of a summer's day cannot endure the winter's cold as well as Cassius did.

The descriptions of Savary may, however, convey to their minds some idea of the value of baths, as luxuries, while the statements of *Addison* and of *Franklin* will carry with them conviction of their use, and the industrious author of the Military Dictionary may furnish them with several curious instances of the application of swimming to war.

SAVARY.—*Grand Cairo.*

THE hot baths known in the remotest times, and celebrated by Homer, have here preserved their allurements and salubrity; necessity has rendered them common in a country where perspiration is abundant, and pleasure has preserved the practice. Mahomet, who knew their value, has made their use a religious precept.

A long description of the building is given by Savary, which the reader will find in his Letters on Egypt.

He proceeds to state that, after reposing in vapour for some time, a gentle moisture diffuses itself over the body; an attendant presses and turns the bather, and when the limbs are become supple *makes the joints crack without trouble*, then *masses** and seems to knead the flesh, without giving the slightest sensation of pain: this done, he puts on a camel hair glove, and continues rubbing and freeing the skin of the bather, which is

* "*Masses*" comes from the Arabic word Masses, which signifies to touch lightly.

quite wet, from every kind of scaly obstruction, and all the imperceptible particles that clog the pores; he then conducts him into a cabinet, pours a lather of perfumed soap on the head, and afterwards retires.*

Being well washed and purified, the bather is wrapped up in hot linen, and follows his guide through various windings which lead to the outward apartment, while this insensible transition from heat to cold prevents all inconvenience. Being arrived at the alcove, a couch is ready prepared, on which the person no sooner lies than another attendant comes, and begins to press delicately with warm cloths all the surface of the body in order to dry it perfectly; the linen is once more changed, and the attendant rubs *the callous skin of the feet with pumice stone, then brings a pipe and Moka coffee.*

On going from a bath filled with hot vapour, in which free perspiration moistened every limb, into a spacious apartment, and the open air, the lungs expand

* The whole expence of bathing thus to me was half a crown; the common people go simply to perspire in the bath, wash themselves, and give a few paras, 2d. or 3d. at departing.

and respire pleasure. Well kneaded, and as it were regenerated, the blood circulates freely, the body feels a voluptuous ease, a flexibility or rather suppleness, till then unknown; a lightness as if relieved from some enormous weight, and the bather almost fancies himself newly born and just beginning to live.

A glowing consciousness of existence diffuses itself to the very extremities, and while thus yielding to delightful sensations, ideas of the most pleasing kind pervade and fill the soul; the imagination wanders through worlds which it itself embellishes, every where drawing pictures of happiness and delight. If life is only a succession of ideas, the vigour, the rapidity with which the memory then retraces all the knowledge of the man, would lead us to believe that the hours of delicious calm, which succeed the bath are an age!

Such are these baths, and the pleasures which the Egyptians still enjoy. Here *they prevent or exterminate rheumatisms, catarrhs, and those diseases of the skin* which the want of perspiration may occasion. Here

they rid themselves of those uncomfortable sensations so common among other nations who have not the same regard for cleanliness and comfort. *The women are passionately fond of these baths, where they go at least once a week,* taking with them servants accustomed to the office of baths. After the usual process they wash the body, and particularly the head with rose water. Their attendants braid their long black hair, with which they mingle precious essences. They blacken the rim of the eye-lid and arch the brow with *cohel.**

Their linen and their robes are passed through the sweet vapour of aloes wood, and they conclude the day in feasting. *Such are the baths in which the Georgian and Circassian women are particularly indulged*; who are neat to excess, and walk there in an atmosphere of perfumes. Though their luxury is hidden from the

* Tin burnt with Gall nuts. *Mustapha Bey Elphi* used it copiously in this country; and Mr. Baldwin the consul informed me that it was procured from the Gulf of Nicomedia in Asia Minor. I tried it in Egypt as a remedy in Opthalmia, where the Turks value it not only as an ornament but as a preservative against that disease.

public, it surpasses that of European women in their own houses.*

Addison observes that there is nothing in nature more inconstant than the British climate, if *we except the humour of its inhabitants.* We have frequently in one day all the seasons of the year. I have shivered in the Dog days, and been forced to throw off my coat in January.

A man should take care that his body be not too soft for his climate ; but rather if possible harden and season himself beyond the degree of cold wherein he lives. Daily experience teaches us how we may inure ourselves by custom to bear the extremities of the weather without injury. The inhabitants of Nova Zembla go naked, without complaining of the bleak-

* The operation of warm baths upon the skin proves particularly salutary if they *are habitually used.* They give to the coarsest skin a *softness*, a *pliancy*, and preserve in it *an elasticity* and a *delicate whiteness*, which no other known expedients can impart to it. The Georgian, Armenian and Circassian women thence derive the extreme fineness and beauty of their skins, and many of the attractions for which they are justly famed.

ness of the air in which they are born; as the armies of the northern nations keep the field all winter. The softest of our British ladies expose their arms and necks to the open air, which the men could not do without catching cold for want of being accustomed to it. The whole body by the same means might contract the same firmness and temper. The Scythian that was asked how it was possible for the inhabitants of his frozen climate to go naked, replied, "*Because we are, all over, face.*" Mr. Locke advises parents to have their children's feet washed every morning in cold water, which might probably prolong multitudes of lives.

I verily believe a *cold bath* would be one of the most healthful exercises in the world, were it made use of in the education of youth. It would make their bodies more than proof to the injuries of the air and weather. It would be somewhat like what the poet tells us of Achilles, whom his mother is said to have dipped when he was a child in the river Styx. The story adds, that this made him invulnerable all over, excepting that part which his mother held in her hand during this immersion, and which

by that means lost the benefit of these hardening waters. Our common practice runs in a quite contrary method. We are perpetually softening ourselves by good fires and *warm clothes.* The air within our rooms has generally two or three more degrees of heat in it, than the air without doors. Young people often from long use can no more live without certain parts of their dress, than without their skins; flannel waistcoats, for instance. Such parts of the dress are not *so properly a coat,* as what the anatomists call *one of the integuments* of the body. Addison further states, that it is the particular distinction of the Ironsides to be robust and hardy, to defy the rain and the cold, and to let the weather do its worst. His father lived to one hundred without a cough; his grand-father used to throw off his hat and go open-breasted at fourscore; he used to be so soused over when a boy, that he looked upon himself as one of the most *case-hardened* of the family; he was so inured and truly tempered that he could say with the Scythian, "*I am* FACE!" or, if my enemies please, *forehead* all over.

Dr. Franklin's Art of Swimming.

I would advise you to learn fairly to swim, as I wish all men were taught to do in their youth; they would, on many occurrences, be the safer for having that skill, and on many more the happier, as freer from painful apprehensions of danger, to say nothing of the enjoyment in so delightful and wholesome an exercise. Soldiers particularly should all be taught to swim; it might be of frequent use either in surprising an enemy or saving themselves. And if I now had boys to educate, I should prefer those schools (other things being equal) where an opportunity was afforded for acquiring so advantageous an art, which once learnt is never forgotten. *B. Franklin.*

During the great heat of summer there is no danger in bathing, however warm we may be, in rivers thoroughly warmed by the sun. But to throw oneself into cold spring water, when the body has been heated by exercise in the sun, is an imprudence which may prove fatal.

The exercise of swimming is one of the most healthy

and agreeable in the world. After having swam for an hour or two in the evening one sleeps coolly the whole night, even during the most ardent heat of summer. Perhaps the pores being cleansed, the insensible perspiration encreases and occasions this coolness. It is certain that much swimming is the means of stopping a diarrhœa, and even of producing a constipation. If those who do not know how to swim should be affected with diarrhœa, at a season improper for that exercise, a warm bath, by cleansing and purifying the skin, is found very salutary and often effects a radical cure.

I speak from my own experience frequently repeated, and that of others to whom I have recommended this.

Common swimming is the act of rowing with the arms and legs, and is consequently a fatiguing operation when the space of water to be crossed is considerable : there is a method in which a swimmer may pass to great distances with much facility by means of a sail, by flying a paper kite, lying on the back, and holding the stick in the hands, the body will be

drawn along the surface of the water in a very agreeable manner. Franklin crossed a large piece of water in this way without the least fatigue, and with the greatest pleasure imaginable. He does not consider it impossible to cross so from Dover to Calais; but thinks the packet-boat preferable.

It is well known that the French have paid particular attention to this branch of military knowledge, (*swimming*), and that there are not only individuals attached to their armies, who can swim with perfect ease, but that companies called "*campagnes de naguers*" have been formed, and are still encouraged in their service. Their dress is adapted to the functions they perform, such as passing a river, &c. in order of battle, or in detached parties, &c. for the purpose of surprising an enemy's advanced posts, or of affording assistance (by dragging light cables across,) to large bodies of their own men who might be ordered to pass in pontoons.

The clothing of these men should consist of a worsted jacket and pantaloons, with sandals made of leather and flannel or woollen cloth. Their weapons should be a long light pike, fixed by means of a ring to a leather

waist belt. The pike, whilst the man is swimming, floats upon the water, and is of considerable use to him. So that after he has been ten minutes out of the water, and upon the march, his dress would be dry or nearly so.

On the top of his cap, a small compartment is made to hold a pistol, with cartridges and a piece of dry linen.

When the island of *Ré* was besieged and blockaded by the English in 1627, Thoiras, who was governor of the place, dispatched three swimmers to make the Duke of Angouleme acquainted with the critical situation in which he stood.---The distance across was upwards of six miles, or two French leagues. One of the swimmers was taken by the English; the second was drowned on his return; but the third reached the duke, communicated the object of his mission, and brought back his answer.

When Cyzicum (the ancient Dindymis, formerly a large and strong place) was closely besieged by Mithridates, Lucullus, (the Roman general) sent instructions to the inhabitants by a swimmer, who faithfully execu-

ted his mission. (Vide James's Military Dictionary, article Swimming.)

Many of our literary men reason upon baths *more from tradition* than from experience—this is to be lamented; as in their respect for received opinions and customs they may oppose *the practice of alternate bathing, which promises to afford, perhaps, more health and more relief in several diseases than any expedients they can resort to.* I have often had to encounter doubts, difficulties, and objections, to the alternate exhibition of baths in cases of weakness; because the recommendation of hot and cold alternately, appeared, it was said, contradictory, and seemed utterly irreconcileable with the common doctrines passing current under those dignified and pompous epithets, the *sound* principles of RATIONAL practice.

Experience however will shew that the weakness in fevers and after fevers may be thus relieved; and that those colliquative perspirations brought on by mercury, may often be speedily removed by hot and vapor baths, either taken alone or *used alternately with cold ablutions,*

in the way recommended by Dr. Currie for the cure of fevers; whose method may, I trust, without exaggeration, be represented as a practice of inestimable value. More lives, I am persuaded, have already been saved by its adoption than we are aware of, or than ignorance or prejudice will readily admit. In some instances, to my knowledge, the great and good effects of the washings were erroneously attributed to medicines, either of no efficacy whatever, or of considerably less energy than the hot and cold ablutions; but as truth has hitherto on most occasions ultimately prevailed, let us hope a practice so simple and salutary as the practice in question cannot long continue shackled with unnecessary restrictions.

Were baths well understood, their use would, no doubt, become much more general than it is, both in health and in disease. I have ever been slow in admitting the operations of opinion and fancy in theories or systems of physic; where nothing but sovereign observation, paramount to all speculation, should direct our course: our knowledge to be useful ought to proceed

solely from *observation.* I contracted at an early age a fondness for the water. I read Thevenot, and Dr. Franklin's anecdotes of himself; and was favourably impressed with his little treatise on the art of swimming. I resided several years in Italy at the universities there, before I finished my professional education in Edinburgh and in London, and I made two voyages to Egypt, Greece, the Levant, and have twice visited Italy and France in professional situations since I resided there; and whether abroad or at home, in London or out of it, I always frequented baths, in whatever shape they came before me. I have been more exposed to contagions, perhaps, than most people; but have hitherto proved insensible to their baneful influence, and I consider myself principally indebted to the use of baths for a large portion of the health I at present enjoy.

I at all times refer to the recommendations of Dr. Currie with peculiar delight. The few ideas I had formed upon these subjects were completely met by his observations, and confirmed by his experience. I acquired much additional information from his book, and thoroughly convinced of its value, I think it a duty to

recommend its perusal. For the successful application of such a remedy as cold in fevers, Dr. Currie may surely be said to deserve every reward that can be voted to him. I believe that his suggestions and his practice are beyond all praise.

Our stock of knowledge upon these important subjects has been further enriched since his time, by the observations and experience of another authority, not less respectable than the preceding, namely, Dr. Saunders; anxious to promulgate their principles I frequently avail myself of their excellent suggestions.

In contributing my mite to the body of information we already possess, I hope I may be permitted to regret, without disparagement to the learned authorities I quote, that the attention of such observers was not directed as extensively to dilution and to *hot and vapor baths*, as it has been to cold and tepid bathing, in fevers and other diseases in which they considered them applicable. Dilution, in the present day is neglected--and we do not yet appear to value justly all the virtues of water, either as a luxury or remedy.

WATER.

Considering water dietetically and medicinally, the following circumstances seem to mark its excellence, and to form the principal part of its medical character.

1st. Simple Fluidity.

2d. Universal Innocence, or the absence of every quality that can offend the most tender of our organs.

3d. Miscibility with all the animal juices, except the fat, provided they are in their natural healthy state! Unfitness to dilute or mingle with them, when they are thickened by disease. In common life we lose sight of an important law of the animal œconomy, a condition to which all animal bodies are subject, viz. the tendency to induration and inspissation, as they advance in years. The softer organs grow firm—those that are supple grow rigid. The organs endowed at first with exquisite sensibility and high organization, grow dull, while the relative quantity and specific gravity of

bony substance are increasing in a rapid progressive ratio. This progress to induration, inspissation, dulness and insensibility, quickened by the use of fermented liquors, may in some degree be checked and counteracted by simple fluidity and dilution. Water attenuates and thereby facilitates excretion, it has too a peculiar determination to the surface, and passes off by the cutaneous pores, in the shape of insensible transpiration, more speedily and plentifully than by the kidneys; in consequence, perhaps, of its total want of irritation. It is, besides, the most commodious medium for applying to the human body, *two powerful agents*, viz. *heat* and *cold*; the one expanding and preserving pliant, the other contracting and constringing, all the soft organs and fluids of which our animal mechanism is constituted.

HEAT AND HOT BATHS.

I was taught to consider hot and vapour baths relaxing—they are represented so in books and in the schools. When I first began to try warm baths, and frequent thermal waters, *I was fearful of remaining too long in them at too*

high a temperature, lest I should bring on relaxation and weakness; and lest in consequence thereof I might lose the fitness and fondness I had acquired for common cold bathing. But as none of these inconveniencies ever followed, the continued use of tepid, hot, and vapour baths, either in my own personal experiments in health, or in the trials I made of them upon others in disease, I grew more and more doubtful with experience upon this point, and began at last to question altogether the truth of this speculative idea, and to consider whether its admission may not be injurious to society, inasmuch as it leaves the mind prejudiced against an healthy, *invigorating,* " not debilitating" *enjoyment ;* and against a remedy, which will be found as agreeable in its adoption as it is efficacious in its operation. I conceive the *warm swimming bath of the ancients* to be one of the greatest luxuries we ought to possess.

Our animal temperature when in health, is at about 96 degrees, or from 95 to 98 degrees.---A bath, to deserve the epithet of *warm,* should convey a sensation of warmth to the skin during the whole time of

immersion. A bath at about 94, or from 92 to 94, though at a temperature lower than that of the body, will nevertheless appear warm; because water is a denser or heavier medium than air: and its heat is pressed by its weight upon the body immersed; and *because perspiration is suspended during immersion in warm water, and the constant flow of heat out of the body into the atmosphere, necessary for the formation of the vapour always emanating from the surface is checked.*---The tepid bath may be said to begin at about 83 degrees, and the warm bath at about 93 degrees, or from 90 degrees or upwards, to as high a temperature as can be born short of inconvenience; the degree of warmth best suited for the warm *swimming bath*, would be from about 87 degrees to 90 degrees. The baths at Bath are in fact the only natural warm baths we possess; our other baths are called warm, not from being warm to the touch, but because in comparison with common spring waters, their temperature is found a little higher than they usually are.

At Bath there are three principal baths---the Public Cross Bath that from 92 to 94 degrees; the King's Bath at about 106 degrees; and the Hot Bath at about 116 degrees.

Our other thermal waters, as *Buxton* and *Matlock*, are considerably below the animal temperature. *Buxton* is at about 82 degrees, which gives a shock at first immersion; though that shock is soon succeeded by a highly soothing pleasurable glow, which, according to Dr. Saunders, is as if the skin were anointed with warm cream. *Matlock* is at about 66 degrees, a temperature so low that it can scarcely be called a tepid bath; it borders on the extreme limits of the cold bath.

The sea in the coldest weather with us is seldom lower than 40 degrees, or higher in the hottest summer than 65 degrees, whereas the heat of rivers, especially when shallow, and when their current is slow, rises higher and sinks lower than those degrees. The temperature of the sea after a succession of sunny days, will be found at times higher than Matlock water.---I found it at Plymouth in September at 66 degrees, and at Sidmouth and Lyme at 64 degrees. At *Carlsbad* in Bohemia, the Caroline baths have been long held in high estimation: these thermal waters, and the exquisite beauty of the country, render it the place of resort of the Hungarian, Austrian, and Bohemian nobility. The most copious stream there is intolerably hot to the touch, boils up with violence, and is called the *prudet* or furious spring---its temperature as it first issues is as

high as 165 degrees, and keeps steadily to the same point: this is hotter than any mineral water used medicinally.

The *Mulhbrun is* 114 degrees.

At Aix-la-Chapelle, the hottest bath is at 143½ degrees, there are others at 116 degrees. At Barrege the hottest is 120 degrees, the coolest water 73 degrees. And around Barrege there are many springs, at from 88 degrees to 135 degrees.

Bristol Hotwel is at about 74 degrees, and Cheltenham water at about 53 degrees to 55 degrees. Dr. Saunders observes that the superior power of conducting heat, which water possesses over air, is a circumstance always to be kept in mind in applying cold externally. On account of the high conducting power of water, *the body immersed must be constantly employed in producing an unusual quantity of animal heat; this is a great effort of the constitution, which if carried too far, goes directly to destroy the animal powers.* Thus the exercise of *swimming* to those accustomed to it, requires comparatively but little muscular exertion; but *being performed under circumstances that highly exhaust the animal strength, it proves more fatiguing than almost any*

other motion of the limbs. This too is encreased by a superior coldness in the medium, and permeability of the skin to heat: and therefore inhabitants of hot climates, protected by the greater unctuosity of the skin, and favored by the warmth of their seas and rivers, are enabled to live almost an amphibious *life.*

Thus in Egypt, the Arabs, who swim from their infancy, swim far, very rapidly, and can remain for hours in the water. The temperature of the sea there, approaches nearly to that of a *tepid* bath. The Maltese, Sicilians, and Neapolitans, remain an incredible time under water, in their common occupation, when they dive for shell fish the "*Frutto di Mare,*" and when they examine the keels of ships: And the Indians, (if we may believe the accounts) remain for nearly half an hour under water in the pearl fishery, which is very extraordinary; as the sea, though warm at the surface, becomes at a certain depth, to which the influence of the sun can never reach, of the temperature of a cold bath.

Captain Ellis let down a thermometer to the depth of 2900 feet, when it came up, the mercury

was at 53 degrees—the thermometer then stood at the surface at 84 degrees. (Vide Philosoph. Transac. for 1751, page 213.

The Edinburgh Encyclopædia (article Pearl), has the following account of the pearl fishery. It states that the diver first ties a stone round his waist or his feet, to make him sink, and fastens a bag of net work round the neck to contain the pearl oysters. Thus accoutred, he precipitates himself sometimes sixty feet under water; and, as he has no time to lose he no sooner arrives at the bottom than he begins to run from side to side, tearing up all the oysters he meets with, and cramming them into his budget. At whatever depth the divers are, the light is so great, that they easily discover all that passes in the sea; and to their great consternation, sometimes perceive monstrous fishes, from which their address in disturbing the water, &c. will not always save them, and they unhappily become their prey. Of all the dangers of the fishery, this is to them the greatest, and most frequent. The best divers will keep under water *near half an hour*, and the rest do not stay less *than a quarter*. Dur-

ring which time they hold their breath, having acquired by long practice the power of retention. When they find themselves straightened, they cut off the stone that drew them down, pull the rope to which the bag is fastened, and grasp it with both hands; when those in the bark taking the signal, haul them up into the air, and unload them of their cargo, which may vary from fifty to five hundred oysters. Some of the divers want a *moment's* respite to recover breath; while the more expert descend again directly, continuing this violent exercise without intermission for several hours.

Dr. Currie, when treating upon HEAT, has the following passage concerning the operation of unguents on the surface; his words are, "*their operation presents, indeed, a subject for important and original observation. The effects of the warm and tepid bath, though more investigated, are scarcely better understood.* "*The commonly received opinion that the warm bath relaxes and enfeebles the system, must, I apprehend, be admitted with many restrictions!!! Immersed in water or in air, heated to a degree that quickens the circulation, we are, doubtless, speedily enfeebled: But by a heat short of*

this, it may be disputed whether debility is ever produced !!!

These expressions are strong and clear : in speaking of the operation of *unguents* upon the surface, it is not of the salutary operation of *simple rubbing, nor of shampooing** that he treats; it is to the medicinal efficacy of mercury, sulphur, opium, or of other remedies introduced through the skin, that he alludes; and, perfectly of opinion with him, I believe we are not yet so well informed of the efficacy of medicines so used as we may be. It is evident that Dr. Currie does not mention heat with that experimental confidence which the practice alone of warm and vapour bathing could have given him; he *doubts* whether heat is relaxing, whether it enfeebles; and *he disputes* whether debility is ever produced by it, unless when excessive. The doubts of so great a man, amount to little less than an admission of what I consider the real fact. His observations and his surmises on all points appear fully justified as far as they went; I only regret that his experience did

* Vide the article Shampooing, page 46.

not extend to heat, to frictions and to shampooing, as largely as it did to cold.

An implicit respect is certainly due to the doctrines and erudition of our ancestors, and we should consider them with all that modesty with which we ought to conduct ourselves in examining received opinions; but with all the freedom and candour we owe to *truth*, wherever we find it, however strongly it may contradict our notions, or oppose our vanity. For it seems a preposterous mode of reasoning to argue against the fair discussion of popular opinions, lest they may be found without any reasonable support, and lest the discovery should at the moment be prejudicial to our interest or our credit. We frequently proceed as if our welfare did not necessarily depend upon the knowledge of truth: that is upon the knowledge of those unalterable relations, which it is ordained that every thing should bear to every other. These relations, truth itself, the only measure of happiness, should be likewise the only measure to direct our reasonings.

To these relations we should attend, and not think to force nature and the whole order of her arrangement by a compliance with our pride and folly, to conform to our artificial doctrines and regulations, to our SOUND principles of RATIONAL practice and our systems of *physic*. By adopting this plan we have arrived at all the useful knowledge we possess, and at all the rational happiness we enjoy, and we daily derive advantages from it which are very visible.

At Bath, if I happen to go into the great cauldron, as it is called, or King's Bath, as I frequently have done, at 106 deg. and continue there half an hour, I certainly grow faint for a moment, and am in a manner overpowered by the heat; but in the course of another half hour, by remaining in the open air I do more than recover, I become a stronger and better man in all my powers and faculties of body and of mind, than I was before immersion.

It is not so after the cold bath, taken in health, either at a temperature a little too low, or continued a little longer than usual; the recovery is neither so rapid nor

so perfect within the half hour as in the former case; and these effects were experienced by others besides myself. My practice at Bath has been to bespeak overnight the PUBLIC CROSS BATH, at four o'clock the ensuing morning, (one hour before it opens to the public) to continue through that hour bathing HOT, in water at 94 deg. and breathing cold, the bath being open to the atmosphere. At five, and often after five o'clock, when other bathers came, I withdrew, and returned to the inn to enjoy two or three hours delightful repose. I did this regularly, and with infinite pleasure every morning last summer for upwards of a month.

I bathed both before and after that month, at Sidmouth, in the sea: and when I came to town I found I could endure the cold bath in Harley-street better; I could swim round it more often, swim farther in the river without fatigue, than I was able to do before I went to bath. I cannot admit heat to be relaxing. The *Calabrians*, the *Sicilians*, inhabitants of a hot climate, are not *a relaxed*, they are *a far more sturdy* people than the northern Europeans. In *Asia Minor*, *Morocco*, at

Marmorrice, ancient Thelmissus, Rhodes, in *Candia* and in the *kingdom of Fez,* provinces still hotter than Calabria, the inhabitants seem formed in a prodigality of nature: for the magnificence of their bulk and stature, the beautiful proportion of their muscularity, render them physically superior to the inhabitants of our northern latitudes. Animated nature there is upon a scale of grandeur and magnificence *not known* in colder countries. The camels and other animals are proportionally expanded and majestic. These *full formed people live in heat;* and *many of them take their baths as regularly as they take their daily bread,* without being enervated or relaxed either in body or in mind: for though from their habits they may be indolent, they are naturally of a very lively imagination, bold, and astute: and had they the advantages of a good government and a good system of education, they would no doubt become morally and physically the finest people in the world. *

* They carry astonishing weights to considerable distances. Many of our grenadiers in Sicily when pitted against the Fachini or carriers, were scarcely able to raise and support burthens with which the Sicilians flew along easily.

This we saw exemplified in the Tuscans, a people of extraordinary ingenuity and inventive powers, of great industry and refinement, who living under a sky as serene and as warm almost as the Calabrian, enjoyed with a mild government, opportunities of improvement which the rude Calabrians did not possess.

We cannot consider heat relaxing, when we attend to the prodigious strength and luxuriance of the vegetation in the countries before mentioned, which prove its invigorating influence as manifestly, perhaps, as the magnificent race of the animals; for as our motto states, ignis, naturis omnibus, salutarem impertit calorem!

The expedients which remove weakness, which restore to health and strength a person melted down by colliquative perspirations, reduced and dejected by excess of mercury, cannot justly be called relaxing!!

Hot and vapor baths have this effect; they certainly do render the skin soft and pliable, but the skin *in health* should be so; and such is the catenation or association

between one function and the rest, so strongly do the internal organs and actions sympathize with the external, and, *vice versâ*, that even the flesh and the joints become to our sensations easy and supple, after warm bathing; but are we from feelings of increased energy and activity to consider ourselves enfeebled?

If when intense, remiss, irregular, or suspended the actions of the nervous and vascular systems are restored to their natural moderation, freedom, equability and order, by the genial influence of warmth and moisture, we surely shall not be thereby weakened; if the blood, proceeding from the heart, is caused to flow in its uninterrupted easy stream, through all the various ramifications of arteries; if the *secreting* vessels are made to perform their offices, and to separate their various humors, while the remaining blood is returned by the veins from the circumference to the centre, in the same moderate continuity of course in which it was originally propelled from thence; if the *excreting* vessels are incited to carry off their proper humours, to deposit in the stated receptacles such as

should be deposited; to discharge such as excrementitious should be discharged. If the internal surface or membrane lining the whole alimentary canal, which is only a continuation by reflection, or a prolongation of the external skin, is brought to sympathize with that external skin on which the bath is acting; if the inward surfaces, partaking of the beneficial influence of the bath on the outward surface, are restored to their natural softness, pliability and moisture;—if the absorbents or lacteals upon those inward surfaces, in sympathy with the external absorbents or lymphatics upon the skin, are incited to take up and convey their proper fluids without stoppage or irregularity, THEN, INDEED, the whole vascular system, in all its various departments of *circulation*, *secretion*, *excretion*, and *absorption*, will be released from painful febrile sensations and motions; and will assume its proper vigour, and be restored to order. *The influence of the bath does all this*, and extends further; it is by no means limitted to the vascular system. The subject may be understood without much anatomical speculation. Though apparently, and in reality, complicated, it

may nevertheless be rendered by the skilful physiologist sufficiently simple to be intelligible.

The surface exposed to the operation of a bath, is extensive, viz. the whole external skin. The first and immediate impressions of the bath are upon that skin, and upon the irritability and sensibility of our external corporeal organs, and through these upon the internal nervous system. Heat and moisture first restore to the skin its natural state of pliancy and softness; the other organs are successively influenced, in virtue of the *consensus*, sympathy,* or association existing between that skin and the *nervous* and *vascular* systems, universally distributed, penetrating and pervading every organ of the body.

If then the *circulation*, the *secretions*, the *excretions*, the *absorbtions*, the *motions of the whole nervous system are restored to order*,—If the *corporeal organs, external and internal, are reduced to, and maintained in, that particular state, and disposition, which render them fit instruments for*

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* Technically termed Catenation.

receiving the influence of the sentient, intelligent, incorporeal principle that actuates the whole, then will the body be enabled to perform and exercise with ease, pleasure and proportional strength, all its various actions and functions. The external organs will then receive and transmit to the mind their several impressions in a just degree, while *the internal senses and powers of memory, imagination and judgment will be lively, clear, and vigorous.* Or in common political language, the balance of power will then be duly established and supported in this microcosm, or little world of man. For when the equilibrium of perfect health is broken, nature generally endeavours to restore equal action : the warm bath seems to predispose the bodily organs for such restoration, and even to support the efforts of nature in bringing it about ; and if the bodily organs can be put into that state on which the conditions of health depend,—by the genial influence of warmth and moisture, shall we be justified in attributing to such beneficial agents, relaxing or debilitating effects ?—My ideas are, at least, in some degree, warranted; for will not warmth and moisture on the surface be found to act frequently like a charm in removing

our distressing sensations of *burning parching heat, and excessive aguish cold?* in extinguishing *thirst*, in allaying *pain and spasms;* whether superficial or deep-seated? in quieting *restlessness*, in releasing *straitness, oppression*, and *anxiety* about the præcordia or lungs? In checking *nervous affections*, as *excessive sensibility, erethismus, itching*, nervous uneasiness? Are not these agents useful in correcting defective feelings, numbness and palsies? Will not warmth and moisture often impart, even to the instruments of voluntary motion, a facility and readiness of action, where there was previous languor and want of strength? Does not their happy influence extend to the digestive organs in *cholics* in *diarrhoea?* To *the kidneys* in the *anguish of a lithiasis?* To the sphincter vesicæ in *stranguary*, to the relief of strictures, to the mitigation of gout, to the removal of several disorders of the softer sex, and of infants? I can indeed confidently assert that baths are great auxiliaries to mercury, and to some other medicines; that much may often be done with them, that cannot be done without them; and, in short, that they may be considered as powerful agents in relieving many of the na-

tural shocks that flesh is heir to. For these weighty reasons, I consider the warm bath as a subject of great importance, and in thus inviting the attention of the public to an object that so materially concerns them,--- I trust I may not be thought to trespass improperly upon their time, or their indulgence.*

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* I have had it in my power to afford relief in a few instances *by a simple dilution and a course of baths*, to persons returning from India and from our colonies, who had suffered severely from the diseases of those hot climates, and from the violence of the remedies necessarily employed there against them.

These sufferers were restored to health by the simple means before mentioned, after they had submitted, in vain, to a painful and protracted exhibition of various medicines.

A nobleman to whom upwards of 530 *grains* of calomel had been given in the West Indies, in less than four days; and a general officer there, who by baths had been roused from delirium, and restored to health from the last stage of yellow fever, both favoured me with their cases.—The latter, afterwards, on board a transport, gave health to others by the same means that he recovered his own.—I shall avail myself of their permission to make their cases known, on some future opportunity.

Among the means of preventing convulsions in women, previous to or during their confinement, Dr. Denman recommends *the warm bath*. He states, that from its occasional use, women will often find

much benefit; and he repeats, that it is *one of the principal means* which medicine affords for preventing puerperal convulsions, and for insuring an undisturbed labour and an uninterrupted recovery. —Here is the testimony of a very great man, in favor of warm baths, which he strongly recommends, under circumstances no less critical *than labours rendered complex by convulsions*, and this recommendation is the more valuable, as it rests not upon any preconceived notion, or speculative reasoning, but upon the long and extensive experience of Dr. Denman.—He states in another part of his work, *that when convulsions have continued or increased, notwithstanding the bleeding, and the use of all the other reasonable means, the patient may be put into the "warm bath," in which she may remain a considerable time if the convulsions are suspended while she is in it. There have been instances of women with convulsions who have been freed from them while they were in the bath; and I have heard of one or more cases of their being* "ACTUALLY DELIVERED IN THE BATH," *without any ill consequences either to the mother or the child.* These statements are among the few to be met with in books, in which this subject seems to be treated not at all as it ought to be. Here we have a man of *enlightened mind, acute observation, and unbiassed judgment*, communicating to the world, without *any parade* of science, the plain result of his extensive experience, and so much importance does Dr. Denman attach to this expedient, that he further states—"When a warm bath could not be procured, or while it was preparing, I have directed flannels wrung out of hot water to be applied over the whole abdomen."

SHAMPOOING.

An expedient neither known nor understood in this country, but generally used in India and the Levant, as a luxury, and often resorted to as a remedy, in very high estimation. The operation is performed by people regularly trained to the office, called *Shampoo-men*; and to be agreeable, must be done with art: it consists in gently pressing and turning the body, rendered previously supple and pliant by warm and vapor bathing: the Shampoo-man causes the following joints to crack without any trouble; the wrist, the elbow, the shoulder; the vertebræ of the neck, and of the back; the instep, the knee, and the hip; and he performs this task as if he were a perfect anatomist. When last in the Mediterranean I saw and submitted to the operation, which was done in the usual manner: to effect the purpose in the dorsal vertebræ, the Shampooing attendant was placed upon a low chair, and made the bather sit upon the ground before it, putting the knee against the concave part of the back, and laying hold of both shoulders,

he suddenly pulled them backwards; and at the same time gave the body an oblique sidling motion; which caused the dorsal articulations to crack, with two distinct explosions, nearly similar to the report of a small pop-gun;—as this was done with much expertness, the sensations were singular, and for a moment rather disagreeable; the shampooing attendant then began to knead the limbs, grasping, pounding and gently squeezing the flesh, with the whole hands, like so much dough, from the extremities to the centre, thereby removing every sensation of pain, and concluded the business by putting on a camel-hair glove, and by rubbing the skin briskly, which took from it all the porous atheromatous obstructions, and rendered it soft and smooth as satin.

The sensations after stuping and macerating a long time in warm water, and in steam, after the process of shampooing, *are certainly very different from sensations of weakness;* they are delightful; for in the bath, health is admitted at every pore; while the latter process imparts to each particular joint its full freedom and all its

latitude of motion:* the whole gives an ease, a pliability, a suppleness and levity to the mind as well as to the body, which may serve both to correct the *vulgar prejudice* of *the* "RELAXING EFFECTS" *of warm bathing*, and to confirm the justness of the inference which the ancients drew of the MENS SANA FROM THE CORPORE SANO.

BATHS IN LONDON.

We have in London several handsome cold baths for medical purposes, but they are at too low a temperature for amusement or for swimming in---Such are the baths in Harley-street, in Bagnio-court, at *Peerless Pool*, &c. The cold bath in Harley-street is about the temperature of 54 degrees. The cold bath at Peerless Pool is something lower, about 52 degrees, and this I believe to be the coldest in London. The warm baths are for the most part mere marble troughs---in which the bather, imprisoned, sits, or reclines; and into which he can admit by turning a stop cock, either hot or cold water, at pleasure.

* The use of the *dumb* bells, common in India, the *quinquertia*, and projectile exercise of the Romans, cannot be too strongly recommended as contributing to give strength and full latitude of motion to the joints of the upper extremities.

There was a warm bath in Bagnio court upon a little larger scale*, 9 feet by 9, nearly 5 feet deep, filled by a steam engine---the bather could just stand erect in it and expand, but the *warm swimming bath* is a luxury wholly unknown in London.

We can form some idea of it from the baths at Bath, at Buxton and Matlock, though the temperature of the latter is not quite so warm as it should be for a swimming bath.

The Romans borrowed their ideas of artificial baths† from the Greeks, who were much devoted to them; and in the luxurious days of Rome, the baths were conducted there at a great expence, and formed a complicated system. All the most splendid and fascinating luxuries of the emperors, were multiplied and brought together in those prodigious monuments of Roman magnificence, the THERMÆ, which were formed in imita-

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* Even this is destroyed.

† The *Balneum* of the Roman authors means a private hot bath. By the *Balnea* they denote the public hot baths.

tion of the Greek Gymnasia ; all that could give entertainment to the mind, afford amusement to the people, all the exercises of the body, all the institutions favourable to health were there assembled.

The Calida Natatio, and the Concamerata Sudatio, or the warm swimming and vapor baths, were the great attractions.

The system was carried at Rome to an astonishing height; and the construction of baths in which the people might be accommodated *gratuitously,* was an established and successful expedient of the Roman emperors for gaining their affections.

The extraordinary expence and magnificence of those structures are well known ; the remains of the baths of Caracalla and Dioclesian, testify their grandeur in our own days. According to Fabricius there were eight hundred and fifty-six public baths at Rome, and some of these were large enough to contain at once, eighteen hundred persons.

The rage for *hot* bathing exceeded all bounds; in the days of Seneca the hottest baths were most in estimation, those of Nero seem to have exceeded the rest in heat.

While other countries and metropolitan cities, as *Petersburgh*, *Constantinople*, *Cairo*, and the cities of the Eastern empire have their BATHS, it may fairly be stated as a stigma upon this otherwise proudly pre-eminent capital, that not one establishment exists within it, where its inhabitants can long and safely indulge in this salubrious exercise, and acquire that experimental confidence in the water which nothing but familiarity with the element can give.

I indeed often lament the want of a *warm swimming bath;* but such a luxury is not to be had easily, and I almost despair of ever seeing it here. It would be too expensive an undertaking for a single individual to attempt, upon speculation; while many difficulties would otherwise attend its formation. An object so desirable might perhaps be obtained, if a number of persons would associate and contribute to its formation and maintenance.

There is a society of gentlemen who meet to seek amusement upon the water. I once or twice have heard that society lightly spoken of in private companies. Though I have not the honour of belonging to their club, I always stand forward in their support, because their amusements appear to me more rational than the amusements of many other clubs of the present day. Yet I do not think they derive all the enjoyment from water which water may afford them, or which they might indulge in, were they possessed of an establishment of baths, or only the *tepid swimming bath* upon a handsome scale.

Such a society might further encrease its amusements if it would bestow a little attention upon some other objects which would become objects of public utility. As, for instance, the construction of life-boats, life-preservers, and, in short, every improvement connected with the arts of sailing, swimming, and the use of baths.

The great difficulty to surmount in forming a swimming bath would be the heating of the water. Nothing

has so much distressed the learned as to find the manner in which the Roman receptacles for bathing were constantly and sufficiently supplied with hot water; the ancients do not inform us of the methods they adopted for heating such large volumes of water as they required to the high temperature they were fond of. I presume it may be done by steam.

All other baths, except the warm swimming bath, namely, the *hot, cold, and vapor baths* for medical purposes, are easily erected, and require but little space; these might be added to the large bath, at a trifling expence, so as to render an establishment compleat.

THE COLD BATH.

Cold bathing cannot be safely taken as an amusement in the middle age, nor later in life, unless the bather has been accustomed to it from youth, and has not omitted its use. The facility of bearing cold is an affair of habit; at least, in the earlier periods of life it may be acquired not only without inconvenience or

prejudice, but with real advantage to the constitution. Perhaps the best mode of giving a taste for cold bathing is to do it gradually: to let it be acquired by degrees from the tepid bath, because the previous use of the tepid bath, as has been stated, gives the power of enduring the cold. Whenever I have omitted to swim for a year or two, and have taken to the water again, I first resumed the tepid bath, and have then returned to the cold. If a child unaccustomed to bathing be plunged suddenly into a cold bath, it may take such an aversion to the water as will not afterwards be easily subdued; but if the child be first allowed to indulge in the tepid bath; and be gradually introduced to the cold, it may be brought not only to bear the cold, but to enjoy it; and the degree of cold to which the constitution may be thus enured is quite astonishing.

At *Petersburgh* the washer-women break the ice of the Neva, and continue washing for hours afterwards. At Paris in the Seine, I have seen the washer-women remain at their work through the day, when the surface of the river was covered with cakes of floating ice.

During the winter campaigns upon the Rhine, and in Poland, the Austrian, Russian, and French armies were exposed to piercing dry, continued cold, without tents, and very often without that consolation which a little snow would have afforded them; for snow on such occasions becomes to the warrior a comfortable blanket, he burrows in it like the cattle on the mountains, and can set the foul fiend at defiance.

To a diminished sensibility of the skin towards the impression of sudden cold, occasioned by long habit, we may probably attribute the ease with which attendants on cold and sea baths remain for some hours in a medium, which from its low temperature would exhaust and benumb those not accustomed to this practice.

The facility of TAKING THE WATER, as it is termed, is to be acquired; a little determination and a few days practice give it; the water is never to be entered gradually by *inches*, for the sensation, then, is unpleasant. A beginner, who always has some aver-

sion to the element should muster resolution and throw himself in; for the same reason that any disagreeable medicine is not to be taken sip by sip, when it would be tasted, but is to be swallowed at a gulp, because the rapidity with which it passes over the organs of taste, the tongue and fauces, causes it not to be perceived. The power of bearing cold can never be sought with impunity by persons advanced in life, and unaccustomed to bathing; to them, *in diseases*, the application of cold, *as a remedy*, may prove extremely beneficial, when properly used; but to them, *in health*, the cold bath taken suddenly, will not always prove an innocent amusement. An expedient more grateful to their feelings is, however, open to them. They may find ample consolation in the *tepid swimming bath*, and need not be under so many cautions and restrictions in resorting to it. Of this luxury women are particularly fond, and when in health they may be freely indulged in it.

If we consider the great difference which there is occasionally between our summer atmosphere and the

heat of the sea, the bleak open aspect of many of our watering places, and the keen winds to which bathers are often exposed, we shall find reason to suspect that a number of invalids, of young puny children, and delicate females have materially injured their health, by an injudicious use of the COLD BATH.

To conclude: the genial influence of warmth and moisture in the earlier periods of life, will be found to favor growth and expansion, in the middle ages will prove invigorating, and when the pressure of years and infirmities steal upon us, warmth, the great foster nurse of nature, combined with moisture, will still support the feeble, will cherish and give health to the shattered constitution of man.

Dr. Franklin was in the constant habit of warm bathing for many years before he died; he used it to relieve the infirmities of age, it answered his purpose, for it afforded him ease under the excruciating torments of the stone, and he lived to the advanced age of 84.

The practices of warm bathing and exercise in warm

water, may therefore be considered as conducive to the health and STRENGTH of the body, and to the ACUTENESS and ENERGY of the mind.

The stupendous magnitude and prodigious remains of the Roman Thermæ, prove the importance the Romans attached to their warm swimming baths, which were considered by them establishments of the first consequence, were eagerly frequented by people of all ages, and assiduously promoted by the emperors to preserve *the health*, STRENGTH, *and* COURAGE *of the citizens*; and the Romans, from their constant use and extensive experience of warm baths, must have been well acquainted with their virtues.

In public calamities, the greatest privation the people of Rome could suffer, was the suppression of the warm baths.

Some of their hot springs were dedicated to Hercules, the god of strength; and a great people so experienced in baths, would not have dedicated to the god of strength that which is now erroneously supposed to *produce a debilitating effect.*

The *Steam bath* may possess some advantages besides its powers peculiar to itself; viz. the facility of procuring and conveying it. There are other circumstances too, with respect to steam and ITS MODES OF APPLICATION, that may be mentioned as proper subjects for speculation, to be decided upon by future experience. These relate to its medication and to the propriety of carrying the exhibition of steam beyond the external surface, the inhalation of medicated vapour, &c.

ADVERTISEMENT.

This publication may be had separately of Mr. Ridgway, and at the different baths in London; but it is particularly requested that all orders from the country, the watering places, &c. may be directed (post paid) to Mr. Este, at his residence in the New Road, Homer Place, or at his chambers, St. James's Street, London.

ERRATA.

Page 4, line 8, dele the word "well."

—— 9, —— 5, from bottom, instead of "carry with them *more* conviction of their use *than* any, &c." read "carry with them *as much* conviction of their use *as* any, &c."

—— 19, —— 11, for "*campagnes de naguers*," read "*campagnies de naguiers.*"

FINIS.

W. Flint, Printer, Old Bailey, London.

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